

# Kentucky: Between Iraq and a Hard Place



**Brian E. Kiser**

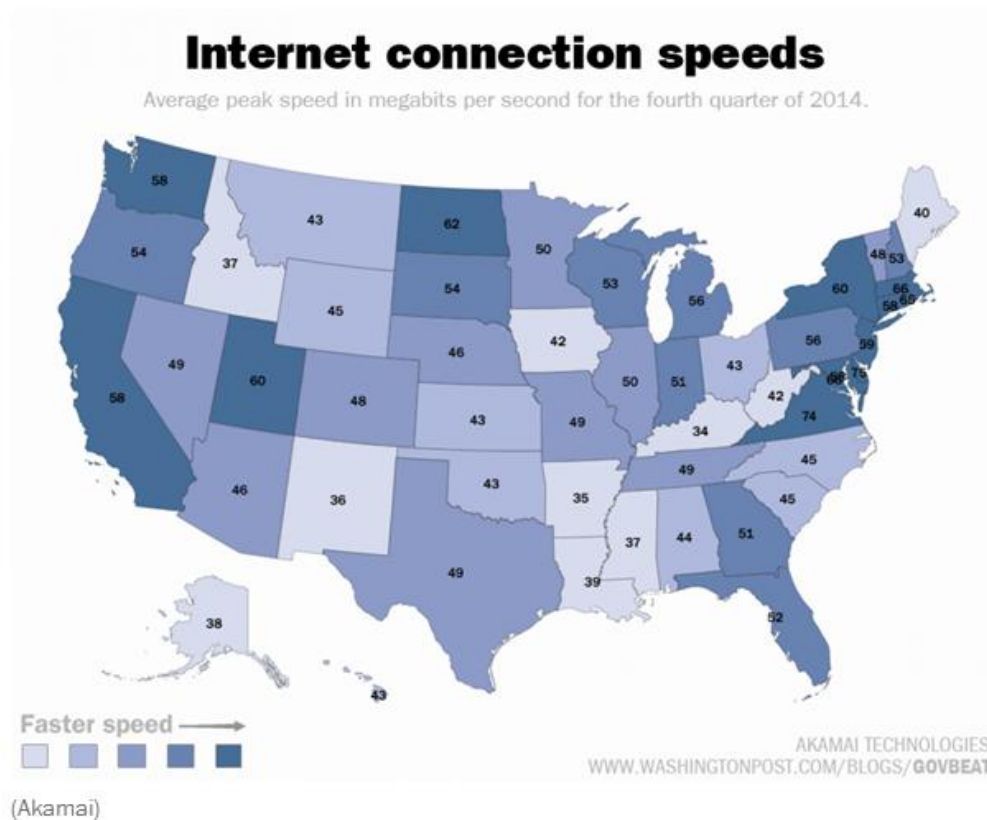
**Office of Broadband Outreach and Development  
Finance and Administration Cabinet**



GovBeat

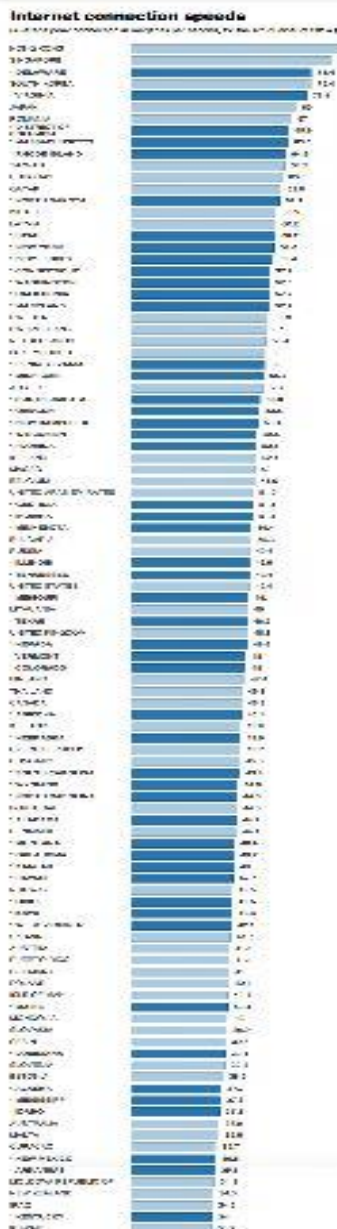
# Map: The state of broadband in the states

By Niraj Chokshi March 25 [Follow @NirajC](#)



Broadband speeds are expanding nationwide and the conditions seem good for even more growth.

Average Peak Broadband Speed



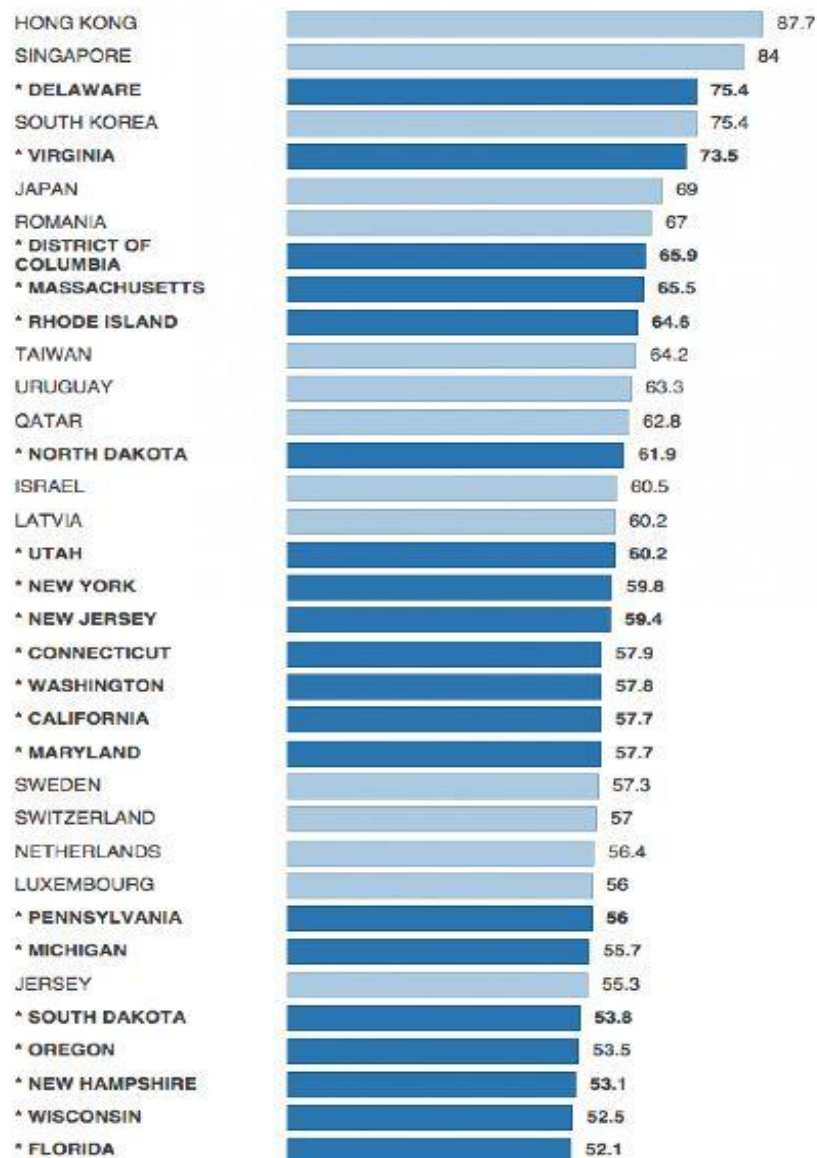
87.7 Mbps

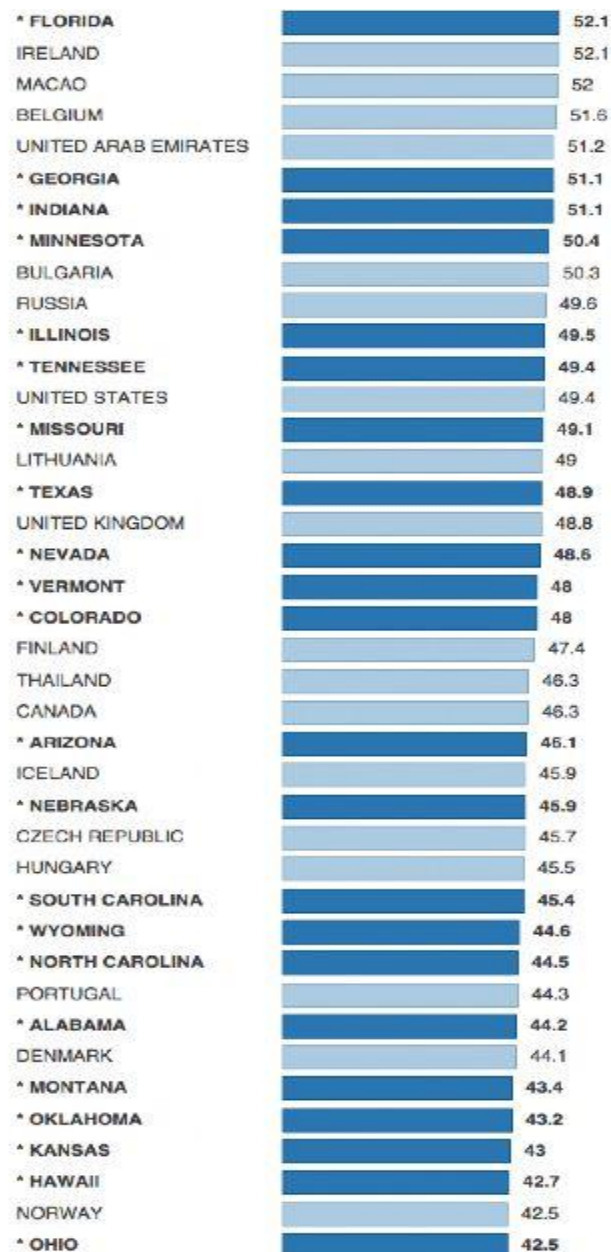


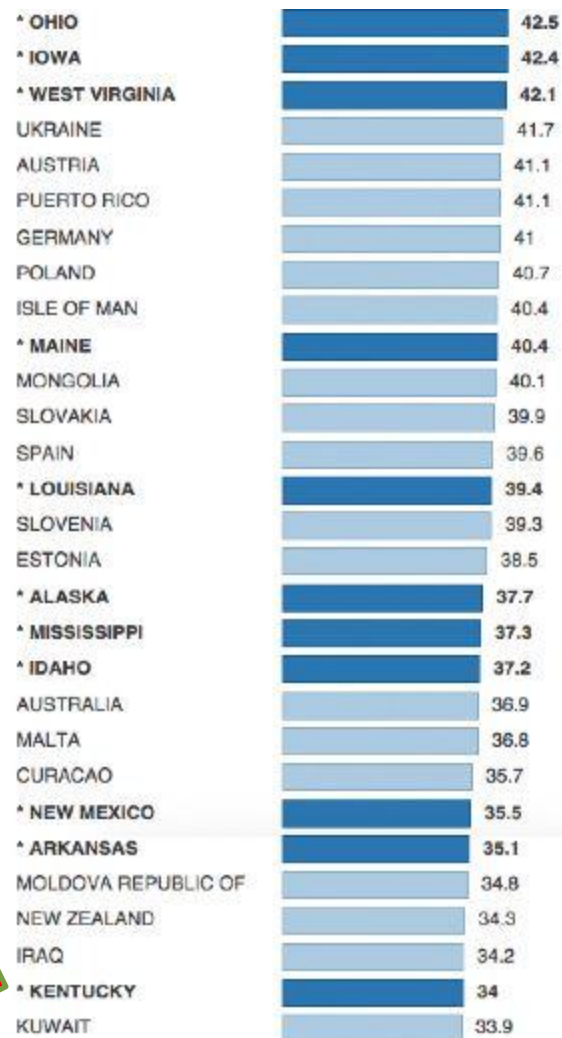
33.9 Mbps

## Internet connection speeds

(Average peak connection in megabits per second, for the 4th quarter of 2014.)





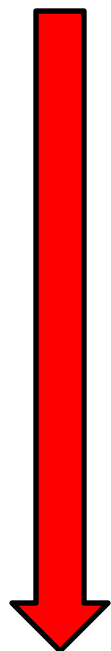


The Washington Post

(Akamai)

**Accessibility + Adequate Speeds + Affordability + Awareness = ADOPTION**

**Bad**



**Limited high capacity fiber**

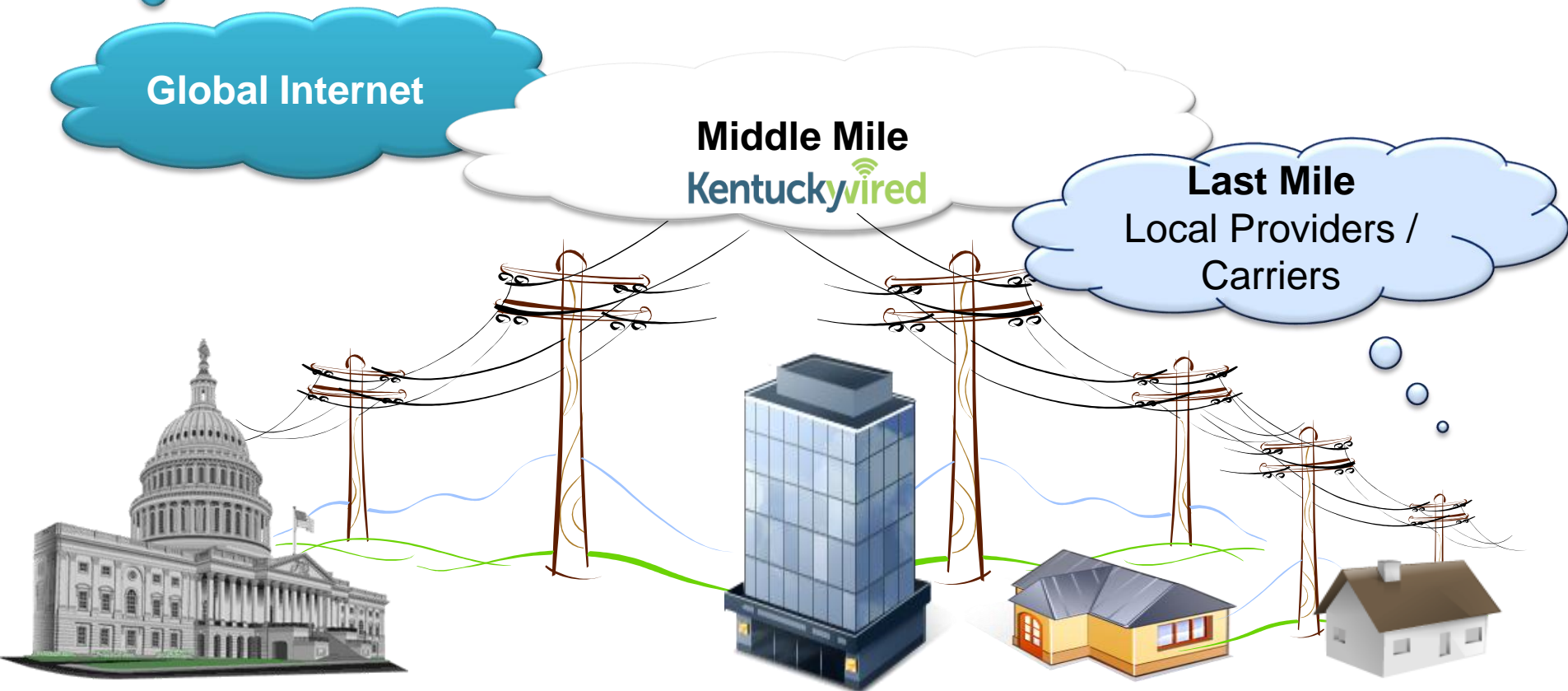
**Kentucky is 46<sup>th</sup> in the nation for broadband availability**

**23% of Rural population has no access vs. 1.5% in Urban areas**

**Only 30% of Eastern Kentucky households adopt broadband vs. 60% urban adopters at the Federal Communication Commission's previous standard speed of 3 Mbps**

**Gap widens with the FCC's new standard speed at 25 Mbps**

**Worst**



**Middle mile** often refers to the network connection between the worldwide Internet and the **last mile**. For instance, in a rural area, the middle mile would connect the town's network to a larger city.

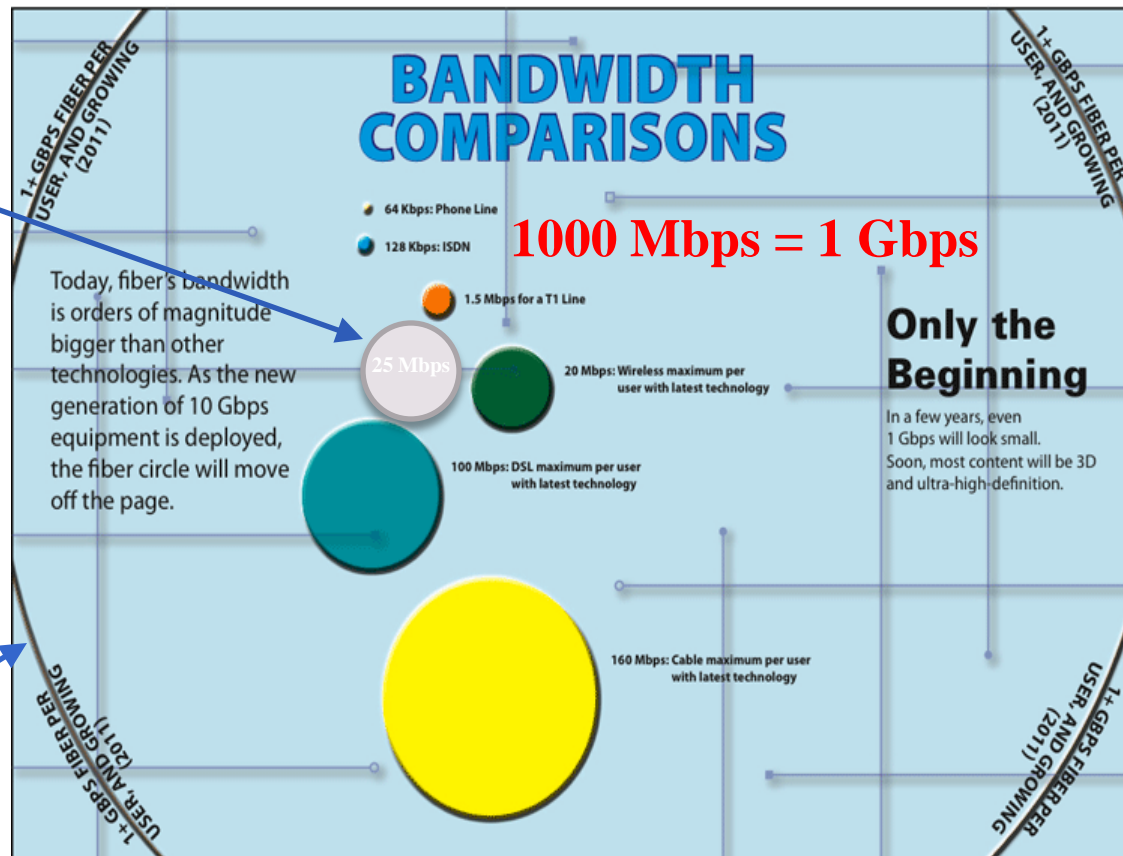
**Fiber-To-The-Premises (FTTP)** - Internet Service Provider (ISP) installs fiber optic cable directly to a home or business.



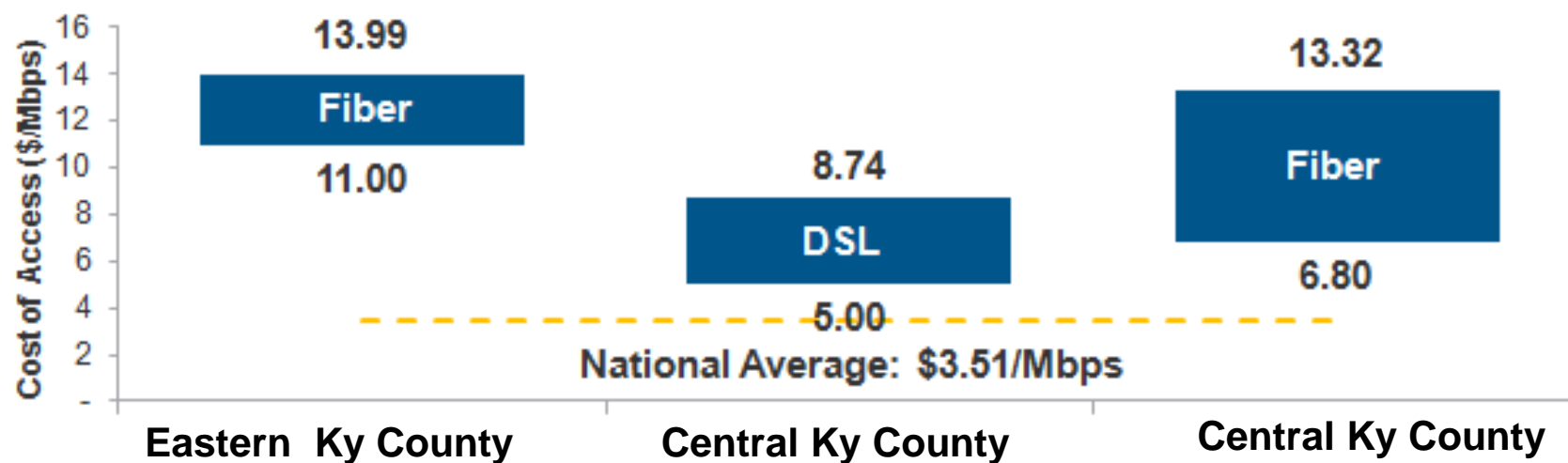
Most U.S. metro areas have access to Fiber and High Speed Broadband

The FCC's current 25 Mbps standard is required to handle many of today's Internet requirements

1 Gbps



\*Mbps (megabits/sec) is **millions of bits per second**  
Gbps (gigabits/sec) is **billions of bits per second**



## Residential Cost of Access

# What is KentuckyWired?

## The Numbers

All 120 Counties

~250 + Priority  
Locations

Over 3000 miles

Statewide

## Priority Locations

K-12

State Universities

KCTCS

CDC/CRD

## The Partnership

Middle Mile  
(State/CRD/Private)

Last Mile (Carriers)

Government (Coops &  
Municipalities)

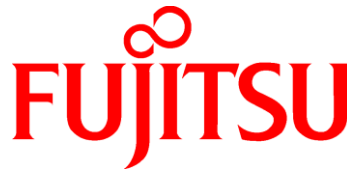
## Vendor Commitment

100+ Crews statewide  
 60% Local labor  
 8-12 % Minority hire  
 ~\$175M Kentucky contracts

## Jobs

Construction phase through 2018

- ~690 FTEs (at Peak)
  - ✓ Engineering
  - ✓ Construction Management
  - ✓ Field Crews



Jobs through life of the contract

- ~20 FTEs
  - ✓ Executive
  - ✓ Engineering
  - ✓ Management
  - ✓ Administration
  - ✓ Skilled Technicians

Contract  
Awarded

Dec 2014

Design  
Complete  
and  
Construction  
Underway

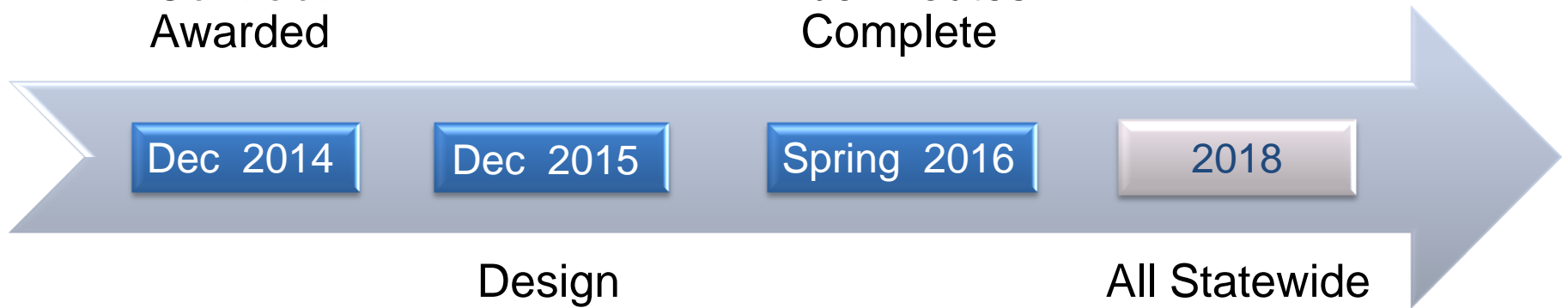
Dec 2015

Initial Priority  
Fiber Routes  
Complete

Spring 2016

All Statewide  
Endpoints  
Complete

2018



**Create a guide to help local leaders bring last mile service to their communities**

- **Provide step by step guidebook to obtain federal funding**
  - ✓ **Appalachian Regional Commission Grants**
  - ✓ **Community Connect thru Rural Utilities Service Grants**
  - ✓ **Rural Utilities Service (USDA Rural Development) Loans**
- **Establish contracts to assist with implementation of new community programs**
- **Create or expand Internet Access Centers**
  - ✓ **Libraries**
  - ✓ **Community Technology Centers**
- **Engage local private sector partners and local government**

## Project & Contact Information

Website

[KentuckyWired.ky.gov](http://KentuckyWired.ky.gov)

[Broadband.ky.gov](http://Broadband.ky.gov)

Email

[KentuckyWired@ky.gov](mailto:KentuckyWired@ky.gov)

Telephone

[\(502\) 782-9549](tel:(502)782-9549)

## End of Presentation

**Slides 17- 23 are supplemental historic information for discussion purposes**



# Population Density

- Population 4,273,951
- Total Area 40,411 square miles
- Households 1,686,618
- 2,250,000 Live on 22% of land
- 50% of population is in the Golden Triangle

**Louisville and  
Surrounding Counties  
Population  
1,100,000**

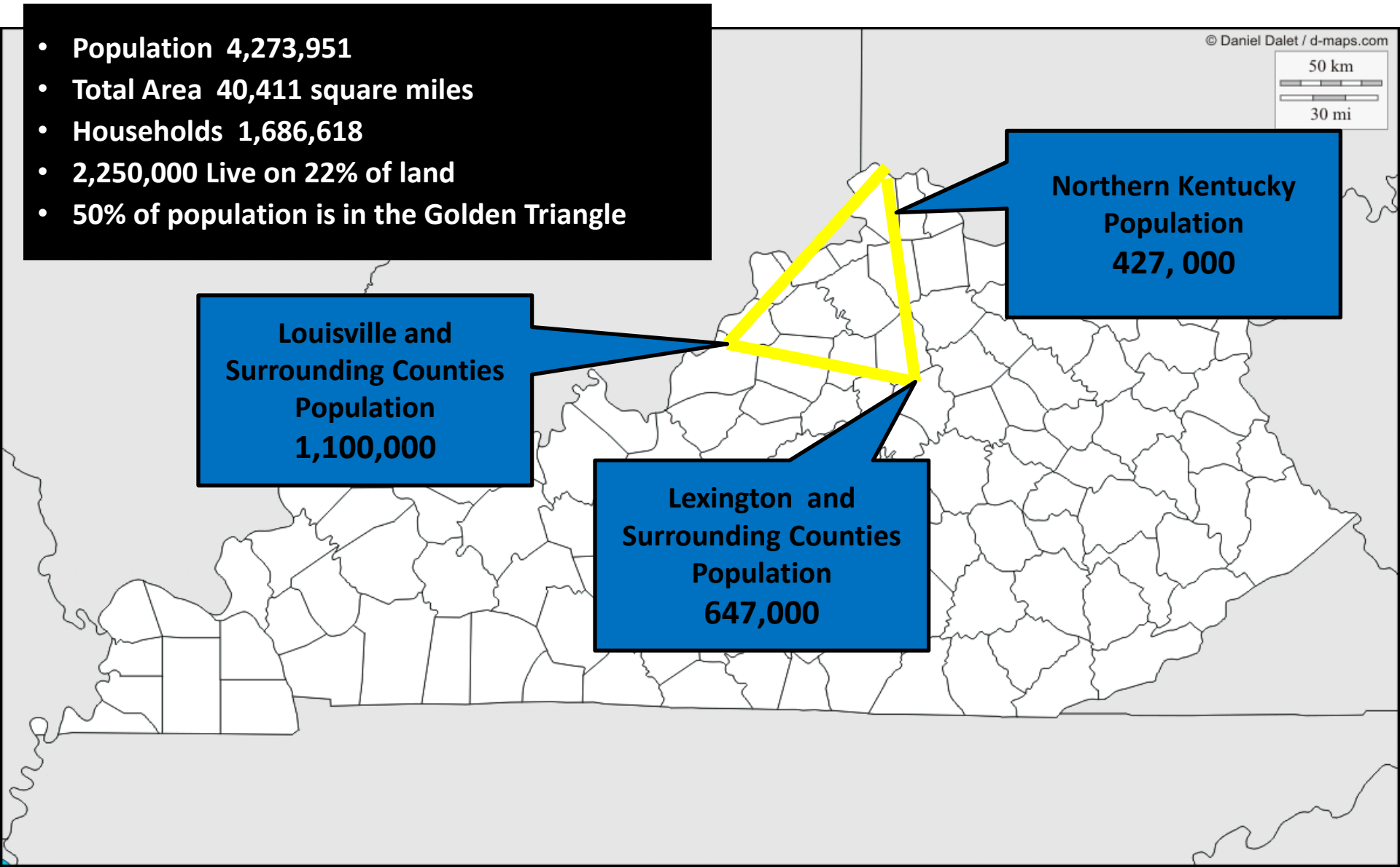
**Lexington and  
Surrounding Counties  
Population  
647,000**

**Northern Kentucky  
Population  
427,000**

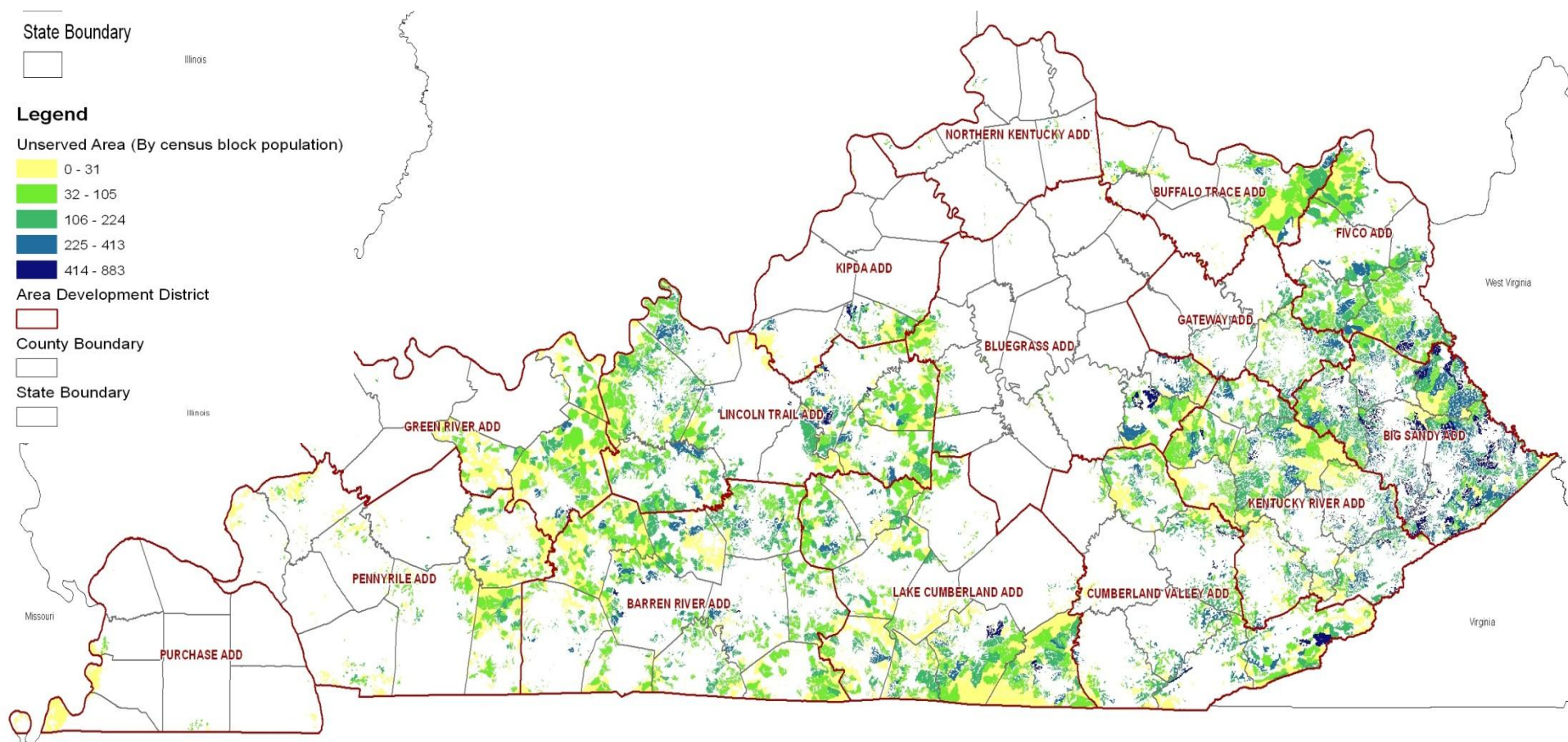
© Daniel Dalet / d-maps.com

50 km

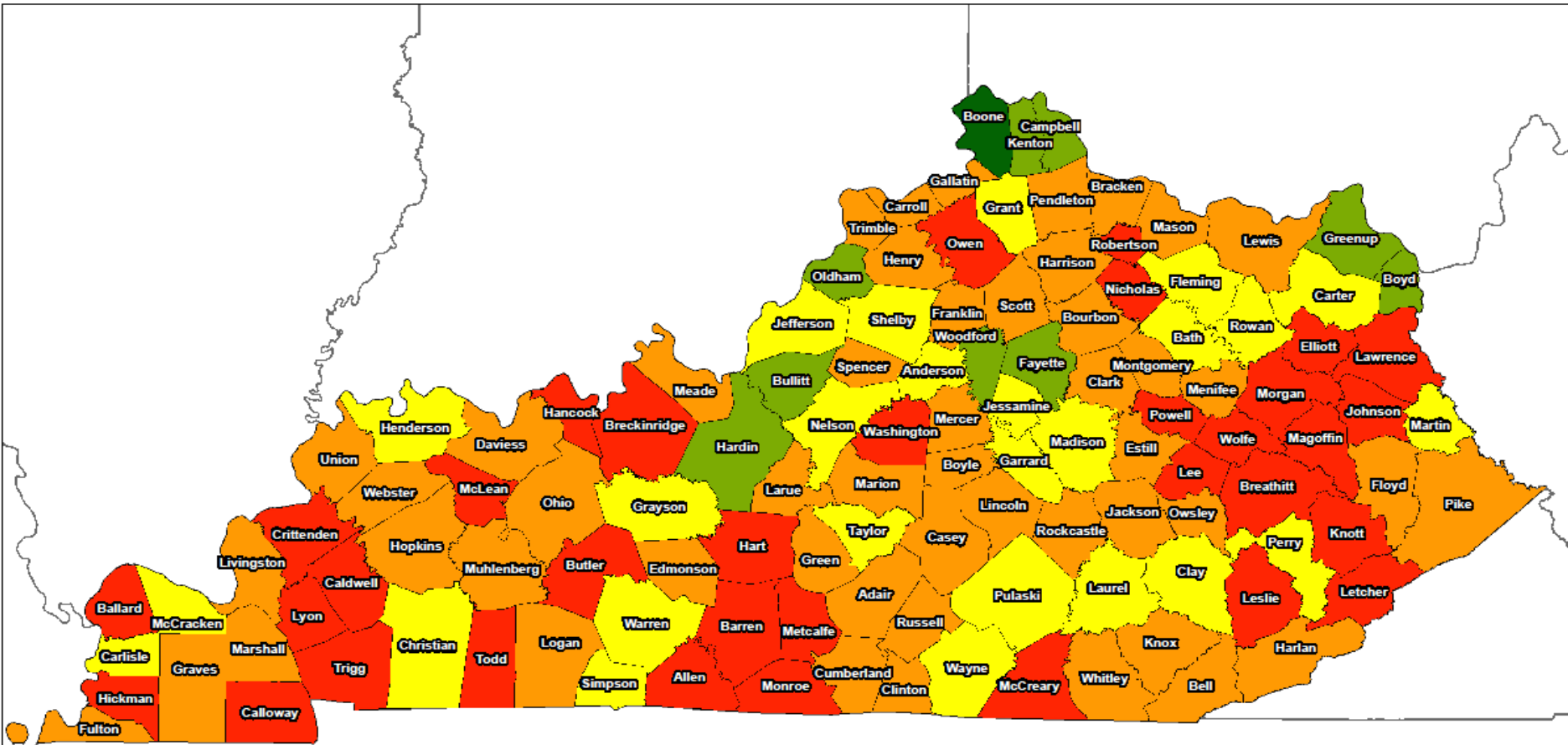
30 mi



# Un-served Kentucky



# Broadband Adoption

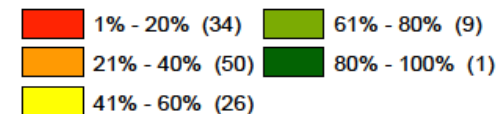


## Household Broadband Adoption per County

Broadband defined as at least 768 kbps downstream and at least 200 kbps upstream

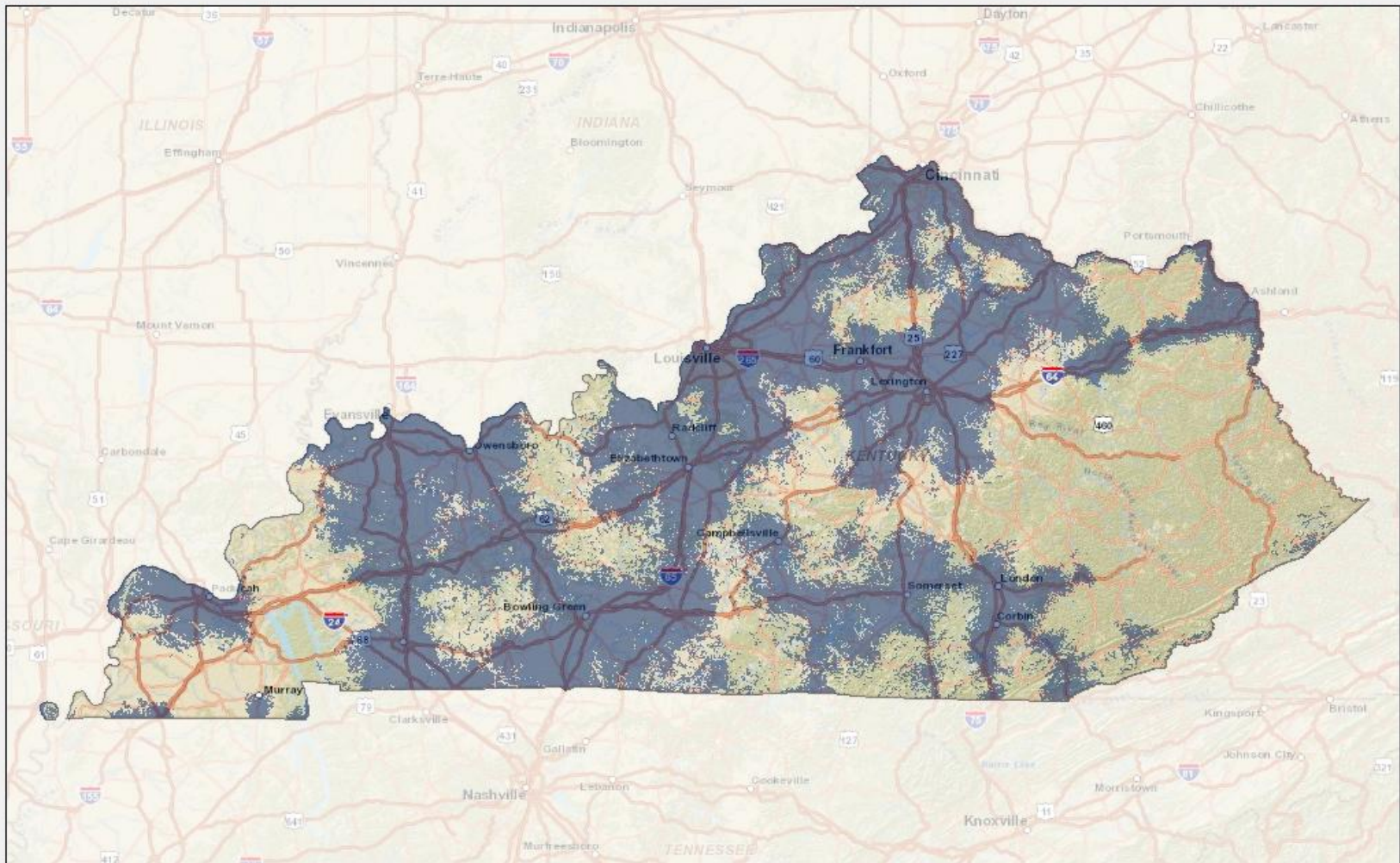
Source: FCC Form 477 | Data current as of June 30, 2013 | Geometry at County level

### Legend





# LTE Coverage



## Kentucky LTE Coverage

Baker



Area: 20,155 Sq Miles  
KY Coverage: 49.88%

Data Current as of June 30, 2013

0 25 50 Miles

### Legend

State Coverage










# Broadband Speed Density

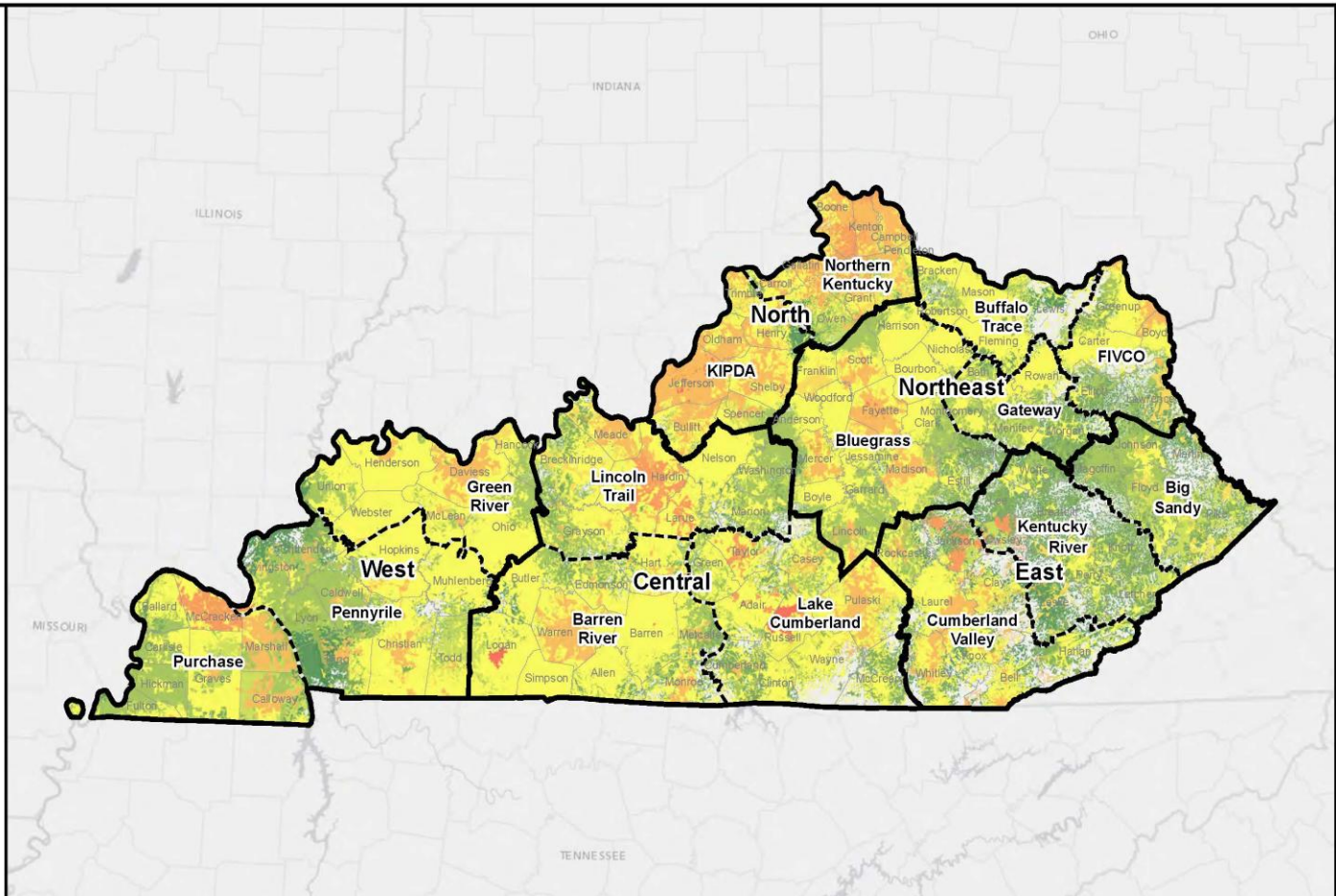
## Legend

### Boundaries

-  Planning Region
-  ADD
-  County

### Reported Maximum Advertised Downstream Speed

-  Greater than or equal to 768 kbps and less than 1.5 mbps.
-  Greater than or equal to 1.5 mbps and less than 3 mbps.
-  Greater than or equal to 3 mbps and less than 6 mbps.
-  Greater than or equal to 6 mbps and less than 10 mbps.
-  Greater than or equal to 10 mbps and less than 25 mbps.
-  Greater than or equal to 25 mbps and less than 50 mbps.
-  Greater than or equal to 50 mbps and less than 100 mbps.
-  Greater than or equal to 100 mbps and less than 1 gbps.
-  Greater than or equal to 1 gbps.



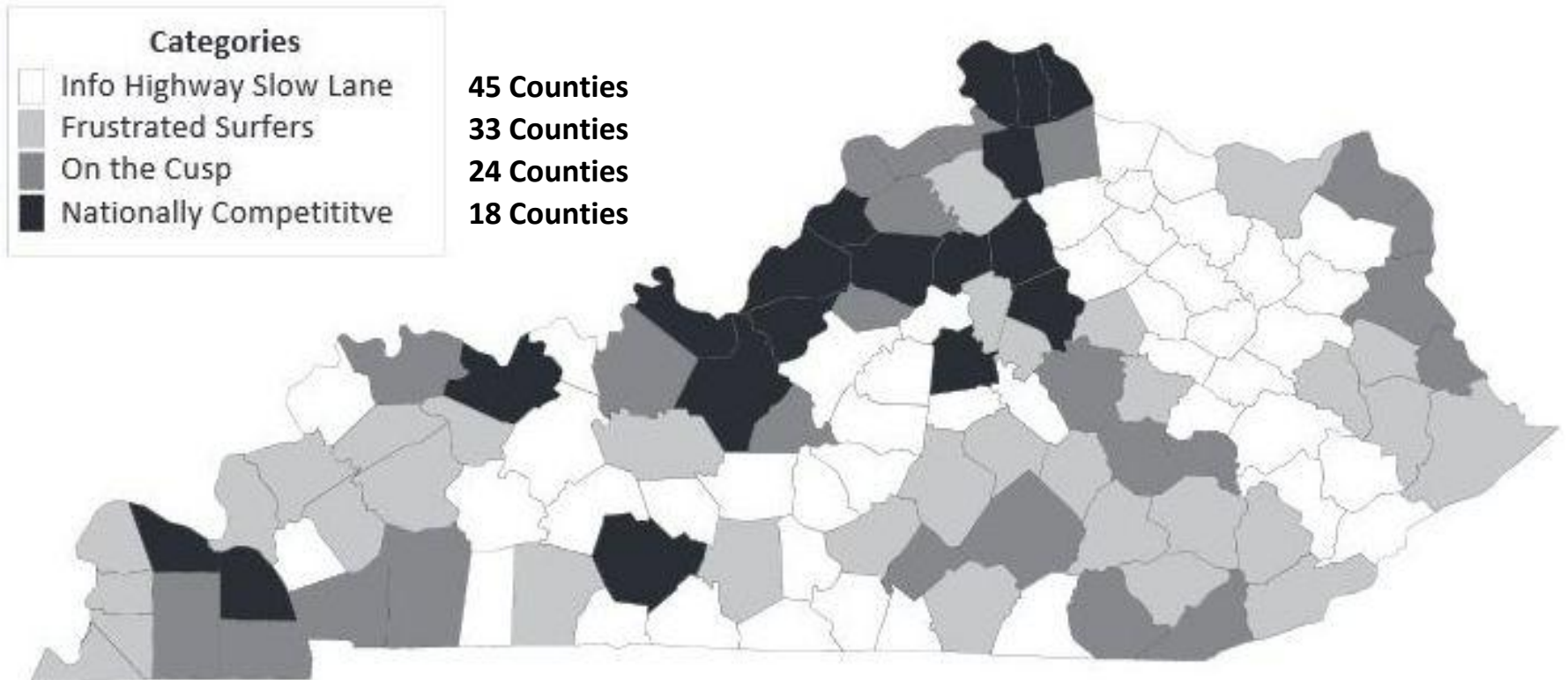
**Disclaimer:** This map and associated information is only as accurate as the source data provided by the broadband service providers participating in this program, and may not be all inclusive of the services provided in a particular area. Furthermore, this map information is updated semi-annually and therefore may not reflect the most current information. Map information is provided on an "As-Is" and "As Available" basis. Neither the OBOD, nor Baker, makes any warranty, representation or guarantee of any kind, express or implied, without limitation, regarding either the accuracy, reliability, timeliness, quality or completeness of mapping or other information provided herein or the sources thereof. Neither the OBOD nor Baker assumes any liability for any errors, omissions, or inaccuracies in the mapping or other information provided herein regardless of the cause of such or any decision made, action taken, or action not taken in reliance upon any maps information provided herein.

**Granularity:** The broadband service area coverage depicted herein has been aggregated to the granularity of either the census block area, or street centerline segment and buffered, depending upon population densities as determined by the U.S. Census Bureau. Service areas are depicted to the entire census block or buffered street segment even if they service only a portion of the census block or street segment, therefore the coverage may be overstated in some areas. Broadband service area coverage for buffered street centerlines may also extend beyond the buffer area, therefore the coverage may be understated in some areas.



# County Speed Rankings

## Estimated High-Speed Internet Infrastructure & Utilization, 2012



*The Internet in Kentucky: Life in the Slow Lane, Michael T. Childress*

